01-21-03 JAN 1 8 2003 Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. RACEMARKO 10/007459 Application Number TRANSMITTAL 11/07/2001 Filing Date David L. Lewis et al. **FORM** First Named Inventor Group Art Unit (to be used for all correspondence after initial filing) **Examiner Name** 136 30.03 Total Number of Pages in This Submission Attorney Docket Number **ENCLOSURES** (check all that apply) After Allowance Communication Assignment Papers Fee Transmittal Form to Group (for an Application) Appeal Communication to Board Fee Attached Drawing(s) of Appeals and Interferences Appeal Communication to Group Licensing-related Papers Amendment / Reply (Appeal Notice, Brief, Reply Brief) Petition After Final **Proprietary Information** Petition to Convert to a Affidavits/declaration(s) Provisional Application Status Letter Power of Attorney, Revocation Change of Correspondence Address Other Enclosure(s) (please Extension of Time Request identify below): Terminal Disclaimer **Express Abandonment Request** Request for Refund Information Disclosure Statement CD, Number of CD(s) _ Certified Copy of Priority Document(s) Remarks Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Mirus Corporation Individual name Signature 12/27/2002 Date

	CERTIFICATE (OF MAILING		
	condence is being deposited with the Unite to: Commissioner for Patents, Washington		th sufficient postage as first class	8/03 M
Typed or printed name Mark K. Johnson				
Signature		Date	12/27/2002	

Burden Hour Statement: This form is estimated to take-0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

OIPE	
B JAN 1 8 2003	
THE TRADEMARK OF	
RADEMARY	
Application of: David Lewis et al.	,

Application of: David Lewis et al. ,)

Serial No.: 10/007,459)

Filed: November 7, 2001)

Group Art Unit:)

For: INHIBITION OF GENE EXPRESSION BY DELIVERY OF SMALL INTERFERING RNA TO POST-EMBRYONIC ANIMAL CELLS *IN VIVO*

INFORMATIONAL STATEMENT

Commissioner for Patents

Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. 1.56, applicant hereby calls to the attention of the Patent and Trademark Office the publications listed on the attached PTO 1449. One copy of each publication is attached.

UNITED STATES PATENTS

Patent No.	Inventor	Issue Date



FOREIGN PATENTS

Patent No. Inventor Issue Date

REFERENCES CITED

Svoboda et al., "RNA in mouse oocytes and preimplantation embryos: effectiveness of hairpin dsRNA," Biochmeical and Biophysical Research Communications; 2001, vol. 287, pp. 1099-1104

Elbashir et al., "RNA interference is mediated by 21- and 22-nucleotide RNAs," Genes and Development; 2001, vol. 15, pp. 188-200

Boutla et al., "Short 5'-phosophorylated double-stranded RNAs induce RNA interference in drosophila," Current Biology; 2001, vol. 11, pp. 1776-1780

Nykanen et al., "ATP requirements and small interfering RNA structure in the RNA interference pathway," Cell; 2001, vol. 107, pp. 309-321

Sharp "RNA interference-2001," Genes and Development; 2001, vol. 15, pp. 485-490

Hammond et al., "An RNA-directed nuclease mediates post-transcriptional gene silencing in drosophila cells," Nature; 2000, vol. 404

Parrish et al., "functional anatomy of a dsRNA trigger: differential requirement for the two trigger strands in RNA interference," Molecular Cell; 2000, vol. 6, pp. 1077-1087

Yang et al., "Evidence that processed small dsRNAs may mediate sequence-specific mRNA degradation during RNAi in drosophila embryos," Current Biology; 2000, vol. 10, pp. 1191-1200

Zamore et al., "RNAi: double-stranded RNA directs the ATP-Dependent cleavage of mRNA at 21 to 23 nucleotide intervals," Cell; 2000, vol. 101, pp. 25-33

Bernstein et al., "Role for a bidentate ribonuclease in the initiation step of RNA interference," Nature; 2001, vol. 409

Clemens et al., "The double-stranded RNA-dependent protein kinase PKR: structure and function," Journal of Interferon and Cytokine Research; 1997, vol. 17, pp. 503-524

Tuschl et al., "Targeted mRNA degradation by double-stranded RNA in vitro," Genes and Development; 1999, vol. 13, pp. 3191-3197

Caplen et al., "dsRNA-mediated gene silencing in cultured drosophila cells: a tissue culture model for the analysis of RNA interference," Gene; 2000, vol. 252, pp. 95-105

Svoboda et al., "Selective reduction of dormant maternal mRNAs in mouse oocytes by RNA interference," Development; 2000, vol. 127, pp. 4147-4156

Wianny et al., "Specific interference with gene function by double-stranded RNA in early mouse development," Cell Biology; 2000, vol. 2

Caplen et al., "Specific inhibition of gene expression by small double-stranded RNAs in invertebrate and vertebrate systems," PNAS early edition; pp. 1-6

Elbashir et al., "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells," Nature; 2001, vol. 411

Bass "The short answer," Nature; 2001, vol. 411

Minks et al., "Structural requirements of double-stranded RNA for the activation of 2', 5'-oligo(A) polymerase and protein kinase of interferon-treated HeLa cells," The Journal of Biological Chemistry; 1979, vol. 254, no. 20, pp. 10180-10183

Manche et al., "Interactions between double-stranded RNA regulators and the protein kinase DAI," Molecular and Cellular Biology; 1992, pp. 5238-5248

Player et al., "The 2-5A system: Modulation of viral and cellular processes through acceleration of RNA degradation," Pharmacol. Ther.; 1998, vol. 78, no. 2, pp. 55-113

Cited' on any patent to issue herefrom.

Respectfully submitted,

Mark K. Johnson Reg. No. 35,909

Mirus

505 South Rosa Road

Madison, WI 53719

(608)238-4400

hereby certify that this correspondence is being deposited with the
Jnited States Postal Service as Express Mail in an envelope addressed or Gommissioner for Patents, Washington, D.C. 20231 on
1/18/03
1 - 1
. /
M
VV }
Signature

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449		Attorney Docket No.: 30.03		Serial No.: 10/007,459				
PORIVI	P10-144	(8 2003 J	Applicant: David	d Lewis <i>et</i>	'al	Group:	
		WA TRAI	ZEMARK OF				Examiner	:
			U.S. PA	ATENT DOCUMENT	S			
Exmnr Intl	Seq	Patent Number	Issue Date	Patentee	Class	Sub Class	Filing Date	;
	_l	FOREIGN PA	TENT OR PUB	 LISHED FOREIGN P	PATENT AP	PLICATIO	N	
		T.	Publ.	Country or		Sub		ansl.
		Document Number	Date	Patent Office	Class	Class	Yes	No
					<u> </u>	<u> </u>		
OTHER	R DOCUI	_		Pertinent Pages, etc		embryos	· effectivene	ess of
		Svoboda et al., "RNA in mouse oocytes and preimplantation embryos: effectiveness of hairpin dsRNA," Biochmeical and Biophysical Research Communications; 2001, vol. 287, pp. 1099-1104						
		Elbashir et al., "RNA interference is mediated by 21- and 22-nucleotide RNAs," Genes and Development; 2001, vol. 15, pp. 188-200						
		Boutla et al., "Short 5'-phosophorylated double-stranded RNAs induce RNA interference in drosophila," Current Biology; 2001, vol. 11, pp. 1776-1780						
	Nykanen et al., "ATP requirements and small interfering RNA structure in the RNA interference pathway," Cell; 2001, vol. 107, pp. 309-321				Α			
	Sharp "RNA interference-2001," Genes and Development; 2001, vol. 15, pp. 485-490				490			
		Hammond et al., "An RNA-directed nuclease mediates post-transcriptional gene silencing in drosophila cells," Nature; 2000, vol. 404						
	Parrish et al., "functional anatomy of a dsRNA trigger: differential requirement for the two trigger strands in RNA interference," Molecular Cell; 2000, vol. 6, pp. 1077-1087							
		Yang et al., "Evidence that processed small dsRNAs may mediate sequence-specific mRNA degradation during RNAi in drosophila embryos," Current Biology; 2000, vol. 10, pp. 1191-1200						
		Zamore et al., "RNAi: double-stranded RNA directs the ATP-Dependent cleavage of mRNA at 21 to 23 nucleotide intervals," Cell; 2000, vol. 101, pp. 25-33				of		

Bernstein et al., "Role for a bidentate ribonuclease in the initiation step of RNA
interference," Nature; 2001, vol. 409
Clemens et al., "The double-stranded RNA-dependent protein kinase PKR: structure and
function," Journal of Interferon and Cytokine Research; 1997, vol. 17, pp. 503-524
Tuschl et al., "Targeted mRNA degradation by double-stranded RNA in vitro," Genes and
Development; 1999, vol. 13, pp. 3191-3197
Caplen et al., "dsRNA-mediated gene silencing in cultured drosophila cells: a tissue culture
model for the analysis of RNA interference," Gene; 2000, vol. 252, pp. 95-105
Svoboda et al., "Selective reduction of dormant maternal mRNAs in mouse oocytes by
RNA interference," Development; 2000, vol. 127, pp. 4147-4156
Wianny et al., "Specific interference with gene function by double-stranded RNA in early
mouse development," Cell Biology; 2000, vol. 2
Caplen et al., "Specific inhibition of gene expression by small double-stranded RNAs in
invertebrate and vertebrate systems," PNAS early edition; pp. 1-6
Elbashir et al., "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured
mammalian cells," Nature; 2001, vol. 411
Bass "The short answer," Nature; 2001, vol. 411
Minks et al., "Structural requirements of double-stranded RNA for the activation of 2', 5'-
oligo(A) polymerase and protein kinase of interferon-treated HeLa cells," The Journal of
Biological Chemistry; 1979, vol. 254, no. 20, pp. 10180-10183
Manche et al., "Interactions between double-stranded RNA regulators and the protein
kinase DAI," Molecular and Cellular Biology; 1992, pp. 5238-5248
Player et al., "The 2-5A system: Modulation of viral and cellular processes through
acceleration of RNA degradation," Pharmacol. Ther.; 1998, vol. 78, no. 2, pp. 55-113

Examiner: Initial citation considered. Draw line through citation if not in conformance and not Considered. Include copy of this form with next Action to applicant